LEX LOCALIS-JOURNAL OF LOCAL SELF-GOVERNMENT
ISSN:1581-5374 E-ISSN:1855-363X
VOL. 23, NO. S6(2025)

"SERICULTURE AND SUSTAINABLE LIVELIHOODS: ECONOMIC IMPACT OF COCOON PRODUCTION IN RURAL TELANGANA"

S.Syamaladevi[1*] & Prof B. Suresh Lal[2*]

[1]*S.Syamaladevi: Research scholar & Assistant professor of Economics, Department of Economics, Kakatiya University, Warangal, Telangana, INDIA,
[2]*Prof B. Suresh Lal: DEAN, HOD, Research Supervisor, Department of Economics, Kakatiya University, Warangal, Telangana, INDIA,

sreeramojusd76@gmail.com[1]
lalbsuresh@gmail.com[2]

Abstract
Sericulture is an important cottage industry that is agro-based and highly contributes to rural economic transformation and the reduction of poverty in Telangana, India. The researcher focuses on the role of the cocoon production on the sustainable livelihoods in rural Telangana by focusing on the analysis of the existing production data, patterns of the employment generation, and related mechanisms of income distribution. Findings of the research are that, in the implementation period of Cluster Promotion Programme (CPP) (2014-2019), Telangana recorded an improvement of 106.58% in Disease-Free Layings (DFLs) distribution with 42.44 lakh DFLs being distributed (out of the 39.65 lakh) and 2,655.1 MT of cocoons being produced, which is equivalent to 379.3 MT of raw silk. The paper has shown that sericulture has an annual income of about 100000 per acre with 4-5 crops and generates at least 5 people per acre per year (mostly women from above 60 percent of the labor force). The results show that the low capital requirements, high returns, and gender inclusion features of sericulture mean that it is an activity that can especially benefit small and marginal farmers, thus playing an important role in alleviating poverty among them as well as empowering women in rural settings. The paper concludes that strategic policy interventions, technological adoption, and market linkages are essential for maximizing sericulture's potential as a sustainable livelihood option in Telangana's rural economy.

Keywords: Sericulture, Cocoon production, Rural livelihoods, Economic impact, Women empowerment, Telangana, Sustainable development, Agricultural diversification

1. Introduction

1.1 Background and Context

Sericulture, the practice of rearing silkworms for silk production, has emerged as one of the most promising agro-based cottage industries in India, particularly in the southern states. India, as the second-largest producer of silk globally, contributes approximately 18% of the world's raw silk production, with an annual production of about 35,000 tonnes out of the global production of 175,000 tonnes. The industry's significance extends beyond mere production statistics, as approximately 6 million persons are engaged in various sericulture activities across the country, with about 57% of the gross value of silk fabrics flowing back to cocoon growers. Telangana, carved out as India's youngest state in 2014, has inherited a rich tradition of sericulture from the erstwhile Andhra Pradesh. The state possesses a suitable climate akin to cocoon-producing areas of Karnataka and Andhra Pradesh, with vast tracts of forest and a substantial tribal population, making it ideal for both mulberry and non-mulberry (Vanya) sericulture. The state government has recognized sericulture as a focus sector for rural development, implementing various schemes and programs to enhance production, productivity, and farmer welfare.

1.2 Significance of the Study

The rural economic change that has been brought about by sericulture presupposes its significance, especially in the Telangana agricultural economy. Sericulture in areas such as Warangal is a viable farm-based economic activity that has a positive impact on the rural poor

population in the unorganized sector because it does not need much in terms of fixed capital and yields a better rate of returns on investment at a regular frequency. The employment potential of the industry, especially to women and the marginalized communities, makes it an important part of the inclusive rural development plans.

It is important to know the economic consequences of cocoon production in rural Telangana for the following reasons. To start with, it informs about the efficiency of the existing policies and programs which are designed to popularize sericulture. Second, it assists in recognizing obstacles and possibilities of large-scale expansion of sericulture efforts to support more rural families. Third, it contributes to the broader discourse on sustainable agricultural practices and livelihood diversification in the face of climate change and market uncertainties.

1.3 Objectives

This study aims to:

1. Analyze the current status and trends of sericulture development in Telangana
2. Evaluate the economic impact of cocoon production on rural households
3. Assess the role of sericulture in employment generation and women's empowerment
4. Identify key challenges and opportunities for sustainable sericulture development
5. Provide policy recommendations for enhancing the contribution of sericulture to rural livelihoods

2. Literature Review

2.1 Global and National Context of Sericulture

The global silk industry is dominated by Asian countries, with China leading production, followed by India. China stands first in global silk production with 68,600 MTs (2019-20), while India stands in second place with 36,152 MTs, followed by Uzbekistan with 2,037 MTs, Vietnam with 795 MTs, and Thailand with 700 MTs. Within India, Karnataka produces 11,143 MTs of raw silk (first place in the country, 2019-20), followed by Andhra Pradesh with 7,962 MTs, Tamil Nadu with 2,154 MTs, and Telangana with 297 MTs.

Research on sericulture's economic impact has consistently highlighted its potential for rural development. Studies by Hanumappa and Erappa (1985) in Karnataka demonstrated the economic viability of sericulture as a supplementary income source for small farmers. Lakshmanan et al. (2000) found that bivoltine cocoon production offered higher returns compared to traditional cross-breed varieties, though with greater technical requirements.

2.2 Sericulture and Rural Livelihoods

The literature emphasizes sericulture's unique characteristics that make it suitable for rural development. Employment generation is identified as one of the major potentials of sericulture and the silk industry in India, with the sector's farm and non-farm activities creating extensive backward and forward linkages. Studies have shown that sericulture has the potential to create maximum employment opportunities compared to alternative crops like sugarcane, turmeric, paddy, maize, and vegetables, generating the highest man-days throughout the year.

The economic benefits of sericulture extend beyond direct income generation. Research indicates that sericulture contributes to reducing rural-urban migration, improving household food security, and enhancing social capital through collective action. The industry's value chain, from mulberry cultivation to silk weaving, creates multiple employment opportunities at different skill levels, making it inclusive and accessible to various segments of rural society.

2.3 Gender Dimensions in Sericulture

The gender aspect of sericulture has received considerable attention in recent literature. Women perform 60% of sericulture activities, making it one of their significant livelihoods that promotes the empowerment of rural women. Studies have documented how women's

participation in sericulture leads to increased household income, improved decision-making power, and enhanced social status.

Sericulture is identified as an ideal avocation for women because it involves mostly indoor activities, requires less physical energy and manual labor, offers work evenly spread throughout the day with intermittent gaps, provides proximity to living places, ensures continuous employment with frequent income, and offers scope for utilizing several by-products for value addition. However, research also highlights challenges faced by women in sericulture, including limited access to technical training, credit facilities, and market linkages.

2.4 Sustainability and Environmental Aspects

Recent studies have emphasized sericulture's environmental sustainability. The mulberry plant's role in carbon sequestration, soil conservation, and biodiversity preservation has been documented. Sericulture is predominantly a women-centric and economic cash crop with less demand for chemical fertilizers and pesticides, making it environmentally sustainable. The integration of sericulture with other farming systems, including intercropping and integrated farming approaches, has shown promise for sustainable intensification of agriculture.

3. Methodology

3.1 Study Area

This study focuses on Telangana state, particularly districts with significant sericulture activities. The state comprises 33 districts, with major sericulture clusters identified in Nalgonda (Y. Bhuvanagiri and Suryapet), Karimnagar (Metpalli), Medak (Zaheerabad), and other districts, including Rangareddy, Mahabubabad, Jangaon, and Warangal.

3.2 Data Collection

The research employs a mixed-methods approach combining:

Secondary Data Analysis: Government reports, statistical bulletins, and policy documents from the Department of Sericulture, Telangana; Central Silk Board publications; district-level agricultural statistics; and academic research papers were analyzed to understand production trends, policy interventions, and economic indicators.

Primary Data Sources: Field observations and case studies from successful sericulture clusters were incorporated to provide ground-level insights into the economic impact of cocoon production.

3.3 Analytical Framework

The economic impact assessment employs multiple indicators:

- Production and productivity metrics (cocoon yield per acre, silk ratio)
- Income generation patterns (gross and net returns per acre)
- Employment creation (person-days per acre, gender distribution)
- Market linkages and value chain analysis
- Sustainability indicators (environmental and economic)

Statistical analysis includes trend analysis of production data, cost-benefit analysis of sericulture operations, and comparative analysis with alternative agricultural enterprises.

4. Current Status of Sericulture in Telangana

4.1 Area and Production Trends

Telangana's sericulture sector has shown significant growth since the state's formation in 2014. During the implementation of the Cluster Promotion Programme (CPP) under XI & XII five-year plans (2014-2019), the state witnessed expansion with 1,874.9 acres of new mulberry plantation with V1 variety under improved spacing among 1,191 farmers.

The distribution of sericulture across districts reveals concentration in specific agro-climatic zones. In Rangareddy district, the existing acreage was 168 acres up to March 2019, with Technical Service Centers established at Shadnagar and Chevella providing technical guidance to farmers. Jangaon district has 187 acres under sericulture, while maintaining the only notified

cocoon market in the entire Telangana State, which serves surrounding districts and other states.

Table 1: District-wise Sericulture Area in Telangana (2019-2024)

District	Area (Acres)	Number of Farmers	Key Infrastructure
Rangareddy	168	Data not available	2 Technical Service Centers, 3 Mulberry Seed Farms
Jangaon	187	Data not available	1 Notified Cocoon Market (2012)
Mahabubabad	653 (estimated)	Data not available	Multiple Technical Service Centers
Siddipet	653	Data not available	Integrated with DPAP programs
West Godavari*	1,260	426	3 Technical Service Centers

*Note: West Godavari is in Andhra Pradesh but serves as a reference for comparison. Source: Compiled from District Horticulture and Sericulture Department Reports (2019-2024)

4.2 Production Performance

The impact of CPP was evident as 42.44 lakh DFLs were distributed against the target of 39.65 lakh with 106.58% achievement, and among 4 clusters, 38.92 lakh DFLs were harvested among 13,711 farmers with 2,655.1 MT cocoon production generating 379.3 MT raw silk. This performance indicates both the expansion potential and the existing productivity levels in the state.

The cocoon productivity shows variation across districts and seasons. Farmers are achieving good crops with high yields of 65-75 kg per 100 DFLs with the support of Chawkie Rearing Centers. The focus on bivoltine silk production has been emphasized to improve quality and market realization.

4.3 Infrastructure Development

Telangana has developed substantial infrastructure to support sericulture:

Cocoon Markets: Government Cocoon Markets are established, such as at Thrimulgherry, Secunderabad, where sericulture farmers dispose their mulberry cocoons with incentives of Rs. 75 per kg for Bivoltine cocoons sold within and outside the state.

Silk Reeling Units: Government Silk Reeling Unit at Shadnagar with 6 basins has been declared as a notified cocoon market, procuring 950 kg of cocoons and producing 125 kg of raw silk daily. Private sector participation is also evident with modern reeling infrastructure.

Technical Support Centers: Multiple Technical Service Centers (TSCs) have been established across districts to provide technical guidance, disease management support, and extension services to farmers.

5. Economic Impact Analysis

5.1 Income Generation

Sericulture provides substantial income generation opportunities for rural households. One acre of mulberry generates a steady annual income averaging Rs. 75,000 to Rs. 100,000 through 4-5 crop cycles. This income is significantly higher than many traditional crops and provides regular cash flow throughout the year.

Table 2: Comparative Economics of Sericulture vs Traditional Crops

Parameter	Sericulture	Paddy	Cotton	Maize
Annual Income/Acre (Rs.)	75,000-100,000	35,000-45,000	40,000-60,000	30,000-40,000
Number of Harvests/Year	4-5	2	1	2
Initial Investment (Rs.)	50,000-70,000	25,000-30,000	35,000-45,000	20,000-25,000
Labor Requirement (person-days)	250-300	120-150	100-130	80-100
Water Requirement	Low-Medium	High	Medium	Medium

Source: Compiled from Department of Sericulture and Agriculture, Telangana (2020-2024)

5.2 Cost-Benefit Analysis

The economic viability of sericulture is demonstrated through favorable cost-benefit ratios. Research studies have shown that the cost-benefit ratio of sericulture is significantly higher at 1:1.94, indicating that for every rupee invested, farmers receive Rs. 1.94 in returns. The major economic factors contributing to the total cost structure are labor (32.54% for silkworm rearing and 13.95% for mulberry production) and equipment for silkworm rearing (11.27%).

5.3 Employment Generation

Sericulture has immense potential for generating employment for not less than 5 persons per acre throughout the year, both directly and indirectly. The employment generation occurs across the value chain:

Table 3: Employment Generation in Sericulture Value Chain

Activity	Person-days/acre/year	Gender Distribution	Skill Level
Mulberry Cultivation	60-80	40% women, 60% men	Semi-skilled
Silkworm Rearing	120-150	70% women, 30% men	Skilled
Cocoon Harvesting	20-30	60% women, 40% men	Semi-skilled
Silk Reeling	40-50	50% women, 50% men	Skilled
Marketing & Transport	10-20	20% women, 80% men	Semi-skilled
Total	**250-330**	**60% women, 40% men**	Mixed

Source: Analysis based on field studies and Department of Sericulture data (2020-2024)

5.4 Impact on Household Economy

Sericulture significantly contributes to household economic stability through:

1. Regular Income Flow: Unlike seasonal crops, sericulture provides income every 2-3 months, ensuring consistent cash flow for household needs.
2. Asset Creation: Investment in sericulture infrastructure (rearing houses, equipment) creates productive assets that appreciate over time.
3. Risk Mitigation: Diversification through sericulture reduces dependence on single crops and weather uncertainties.
4. Value Addition Opportunities: It allows the households to participate in value addition, such as silk reeling and weaving, to earn more money.

6. Social and Gender Dimensions

6.1 Women's Empowerment

The participation of women in the business is more than 60 percent in silkworm rearing and cocoon reeling, which are very important processes in silk making, and some estimates indicate up to 80 percent involvement in other related processes, such as mulberry plantation, rearing, reeling, and weaving. Such a high degree of engagement has a great empowering, HMO results:

- Economic Empowerment: Women are making independent income, which makes them financially stable and gives them control over economic resources.

- Social Empowerment: Women involved in sericulture are empowered socially and in decision-making in households, and also their community is recognized.
- Skill Development: Technical Training in sericulture empowers the women with specialized skills that enhance their human capital and value in the market.

6.2 Marginalized Communities Inclusion.

- Small and marginal farmers who have small land areas are particularly the beneficiaries of sericulture because mulberry can be used as an intercrop with other horticulture crops. The inclusive nature of the industry is witnessed in:
- Low barrier to entry: The initial investment is relatively low and therefore sericulture is affordable to resource-poor farmers.
- Tribal Involvement: In areas such as Warangal, not only is the production of mulberry and tasar silk a part of tribal involvement, but tasar sericulture is also traditional amongst many tribes.
- Caste-Neutral Occupation: Sericulture is a cross-caste and interfaith occupation, which enhances social solidarity.

6.3 Migration Reduction

Sericulture prevents the movement of the rural population to cities as it offers jobs at the local level. The effects of this are several positive effects:

- Preservation of family units and social structures
- Reduced pressure on urban infrastructure
- Maintenance of rural demographic balance
- Continuity of traditional knowledge systems

7. Sustainability Aspects

7.1 Environmental Sustainability

- Sericulture has had positive environmental credentials:
- Minimal Chemical Usage: Mulberry crop does not require a lot of chemical fertilizers and pesticides, and it is therefore environmentally friendly.
- Water Resources: Mulberry is a dry crop that is not excessively irrigable and can be cultivated with minimal irrigation facilities.
- Carbon Sequestration: Mulberry plantation also leads to carbon sequestration and enhances the condition of the soil by adding organic matter.
- Biodiversity Conservation: Introduction of sericulture on the current farm systems increases biodiversity in the agricultural systems.

7.2 Economic Sustainability

- Sericulture has an economic sustainability which is supported by:
- Market Demand: There is a high supply gap as the total silk demand stands at 65,000MTs against domestic production of approximately 36,000MTs, hence the market is stable.
- Government Support: Comprehensive policy support through subsidies, technical assistance, and market interventions ensures sector viability.
- Value Chain Integration: Development of forward and backward linkages creates a robust economic ecosystem.

7.3 Social Sustainability

Sericulture's social sustainability is evident through:

- Intergenerational knowledge transfer
- Community-based organizations and cooperatives
- Cultural preservation through traditional silk weaving practices
- Social capital formation through collective action

8. Government Interventions and Policy Support

8.1 Subsidy Schemes

The Telangana government provides comprehensive subsidy support:

Supply of quality disinfectants to farmers on a 75% subsidy, assistance for the construction of silkworm rearing sheds on a 75% subsidy, and assistance for farm mechanization on a 50% subsidy.

Incentives include Rs. 100 per 100 Disease Free Layings of Bivoltine variety (with DFL cost of Rs. 650), Rs. 75 per kg incentive on Bivoltine Cocoons, Rs. 40 per kg on Cross Breed Cocoons, and Rs. 150 per 100 Bivoltine DFLs for chawkie worms.

8.2 Convergence Programs

Telangana is the first state to cover Tasar silkworm rearing under convergence with MGNREGS, whereby tasar farmers get 145 man-days covering 2 beneficiaries per family, providing Rs. 62,000 additional income besides regular tasar crop income.

For the Mulberry bush plantation, Rs. 1.25 lakhs is provided (Rs. 53,000 in the first year and Rs. 36,000 each in the second and third years) under MGNREGS for 2 acres, and Rs. 1.03 lakhs for Silkworm Rearing Shed construction.

8.3 Technical Support Infrastructure

The state has established:

- Multiple Technical Service Centers in sericulture clusters
- Government silk farms for quality planting material
- Chawkie Rearing Centers for young-age silkworm supply
- Cocoon markets for assured procurement
- Training and capacity building programs

Table 4: Government Support Schemes for Sericulture in Telangana

Scheme Component	Subsidy Rate	Beneficiary Share	Coverage
Disinfectants	75%	25%	All farmers
Rearing Sheds	75%	25%	All farmers
Farm Mechanization	50%	50%	All farmers
Mulberry Plantation (MGNREGS)	100%	Labor contribution	2 acres maximum
Drip Irrigation (SC/ST)	100%	0%	5 hectares maximum
Drip Irrigation (BC)	90%	10%	5 hectares maximum
Drip Irrigation (Others)	80%	20%	5 hectares maximum

Source: Department of Sericulture, Telangana (2024)

9. Challenges and Constraints

9.1 Production Challenges

Despite significant progress, sericulture in Telangana faces several production-related challenges:

1. Disease Management: Silkworm diseases remain a major constraint, causing significant crop losses during adverse weather conditions.
1. Quality Seed Supply: Sufficient supply of quality disease-free layings (DFLs) is also a challenge, especially in the case of bivoltine varieties.
2. Climate Change: Rising levels of temperature and rain out of season influence the production of mulberry and the rearing of silkworms.
3. Technical Knowledge Gaps: Although they have tried extension, the adoption of better technologies among the traditional farmers is not optimal.

9.2 Market Challenges

- The constraints related to the markets are:
- Price Swings: Cocoon prices are highly volatile, which implies that they can impact the stability of income earned by farmers.
- Poor Infrastructure of Markets: Although Jangaon is the only notified market of cocoon in the entire Telangana State, many districts do not have proper marketing infrastructure.
- Imports competition: The Chinese silk imports influence the domestic price realization.
- Quality Standards: The international quality standards applied in the export market are still difficult to achieve.

9.3 Institutional Challenges

- Credit Access: Sericulture farmers engage in a profitable business, yet they are experiencing challenges in obtaining institutional credit.
- Insurance Coverage: The risk exposure is higher due to the absence of thorough crop insurance for sericulture.
- Coordination Gaps: There is little coordination between various departments, which impacts on convergence program implementation.
- Research-Extension Connection: There should be an increase in the transfer of technology between research institutions and farmers.

9.4 Social Constraints

- Labor Shortage: Migration of young people from rural areas to urban areas brings about a shortage of labor in the off-season.
- Gender Inequality: Women are limited in accessing markets, credit, and training despite the high levels of female participation.
- Land Tenure Problems: Tenants without land titles and tenant farmers are challenged in obtaining government schemes.

10. Opportunities and Way Forward.

10.1. Technological Opportunities 10.1.

- There are emerging technological interventions that have a lot of potential:
- Precision Sericulture: IoT sensors to check the temperature and humidity in the rearing houses.
- Mobile Applications: Online solutions with the help of which diseases are diagnosed, market information, and technical instructions are provided.
- Mechanization: The use of labor-saving machines in harvesting mulberries and keeping silkworms.
- Biotechnology: Development of disease-resistant silkworm breeds and high-yielding mulberry varieties.

10.2 Market Opportunities

With a national silk demand-supply gap of nearly 33,000 MTs, significant market opportunities exist for expansion. Specific opportunities include:

1. Export Markets: Growing global demand for organic and sustainable silk products.
2. Value Addition: Development of silk-based products beyond traditional textiles.
3. Branding: Geographic Indication (GI) tagging for Telangana silk products.
4. E-commerce: Direct farmer-to-consumer marketing through digital platforms.

10.3 Policy Recommendations

Based on the analysis, the following policy interventions are recommended:

1. Cluster Development Approach

- Strengthen existing sericulture clusters with comprehensive infrastructure

- Develop new clusters in potential areas with suitable agro-climatic conditions
- Create cluster-specific value chains from production to marketing

2. Technology Adoption

- Establish demonstration units for showcasing best practices
- Provide technology adoption incentives for progressive farmers
- Strengthen research-extension linkages through Farmer-Producer Organizations

3. Market Reforms

- Establish additional cocoon markets in major production districts
- Implement a minimum support price mechanism for cocoons
- Develop quality-based pricing systems to incentivize better production practices

4. Financial Inclusion

- Design sericulture-specific credit products with flexible repayment schedules
- Introduce comprehensive crop insurance covering all risks
- Establish venture capital funds for sericulture entrepreneurs

5. Women-Centric Interventions

- Create women-exclusive sericulture cooperatives
- Provide specialized training programs for women entrepreneurs
- Ensure women's representation in decision-making bodies

6. Convergence Enhancement

- Strengthen convergence with MGNREGS for infrastructure development
- Link sericulture with other rural development schemes
- Integrate sericulture in watershed and climate resilience programs

11. Conclusion

This comprehensive analysis of sericulture's economic impact on rural livelihoods in Telangana reveals its significant potential as a sustainable development pathway. The achievement of 106.58% of DFL distribution targets and engagement of 13,711 farmers in producing 2,655.1 MT of cocoons demonstrates the sector's growth trajectory. With annual income generation of Rs. 75,000-100,000 per acre and employment creation for 5 persons per acre, sericulture proves to be economically superior to many traditional agricultural enterprises. The industry's inclusive nature, particularly its ability to engage women (comprising 60-80% of the workforce) and marginalized communities, makes it a powerful tool for social transformation. The environmental sustainability of sericulture, with its low demand for chemical inputs and minimal irrigation requirements, aligns well with climate-smart agriculture objectives.

However, realizing sericulture's full potential requires addressing challenges related to disease management, market infrastructure, credit access, and technology adoption. The substantial market opportunity, with India's silk demand exceeding domestic production by nearly 33,000 MTs, provides a strong economic incentive for sector expansion.

Policy interventions should focus on strengthening the entire value chain, from mulberry cultivation to silk marketing, with particular emphasis on technology adoption, market reforms, and women's empowerment. The integration of MGNREGS and other rural development programs is a successful convergence, and this shows that there is a possibility of integrating approaches to rural transformation.

The Sericulture in Telangana is at a critical crossroad, wherein strategic investments and a policy-backed initiative can lead to the eradication of the current situation of the industry being treated as a supplementary source of income to a major catalyst of rural development. The fact that the sector can sustain livelihoods and at the same time conserve the environment and enhance social equity is what makes it a perfect case study in the 21st century in the field of inclusive rural development.

The arguments expressed in this paper are solid in support of growth and intensification of sericulture as a mechanism to accomplish various Sustainable Development Goals, which include poverty eradication, gender equality, decent work and economic growth, and responsible consumption and production. During the modernization and rural transformation development of Telangana, sericulture can be not only a means of economic development but also the development of strong, good, and fair rural communities.

References

Benchamin, K. V., & Jolly, M. S. (1987). Employment and income generation in the rural areas through sericulture. *Indian Silk*, 26(6), 8-15.
Central Silk Board. (2020). *Annual Report 2019-20*. Ministry of Textiles, Government of India.
Central Silk Board. (2024). *Note on sericulture statistics*. Retrieved from https://csb.gov.in
Department of Horticulture & Sericulture. (2024). *Sericulture development in Telangana*. Government of Telangana. Retrieved from https://horticulture.tg.nic.in
Department of Sericulture. (2019). *District-wise sericulture statistics*. Various District Administrations, Government of Telangana.
Eswarappa, K. (2011). Developmental initiatives and sericulture in a South Indian village. *South Asia Research*, 31(3), 213-229.
Eswarappa, K. (2013). Role of women in sericulture and community development: A study from a South Indian village. *SAGE Open*, 3(3), 1-14.
Gangopadhyay, D. (2008). *Silk industry in India: A review*. India Science and Technology.
Government of Telangana. (2020). *Cluster promotion programme impact assessment report*. Department of Sericulture.
Government of Telangana. (2024). *Horticulture and sericulture schemes and subsidies*. Retrieved from various district websites.
Hanumappa, H. G., & Erappa, S. (1985). Economic issues in sericulture: A Study of Karnataka. *Economic and Political Weekly*, 20(31), 3122-3224.
Hiware, J. (2016). Sericulture: An employment-generating household industry. *International Journal of Agricultural Sciences*, 8(15), 1234-1239.
Kasi, E. (2013). Role of women in sericulture and community development. *Contemporary South Asia*, 21(2), 145-162.
Lakshmanan, S., Geetha Devi, R. G., & Suma, N. (2000). Studies on economics of bivoltine versus cross-breed cocoon production in K. R. Nagar taluk of Mysore district. *Indian Journal of Sericulture*, 39(2), 149-151.
Manjunatha, N., et al. (2017). An economic analysis of silkworm cocoon production: A case study in Kolar district of Karnataka. *Agricultural Science Digest*, 37(2), 141-144.
Naik, P. K. (2017). Sericulture as a tool for sustainable national development. *Asian Research Journal of Agriculture*, 5(2), 1-8.
National Institute of Rural Development. (2015). *Engendering rural livelihoods: Supporting gender responsive implementation of National Rural Livelihoods Mission*. UN Women & Ministry of Rural Development.
Pathare, P. P. (2017). Participation of women in sericulture activities of Ahmednagar District, Maharashtra, India. *International Journal of Research*, 4(3), 234-241.
Qadri, S. M. H., & Balasaraswathi, S. (2015). Economics of sericulture under dry farming conditions in Chamarajanagar district of Karnataka. *Journal of Agriculture and Veterinary Science*, 8(2), 34-38.